

WESTMEAD: A BOOMING HEALTH, EDUCATION AND INNOVATION PRECINCT



INVEST
PARRAMATTA



Artist illustration of the Western Sydney University Innovation Quarter, Westmead

THE CITY OF PARRAMATTA IS THRIVING

THE GEOGRAPHICAL CENTRE OF GLOBAL SYDNEY, THE CENTRAL RIVER CITY IS EXPERIENCING UNPRECEDENTED GROWTH AND TRANSFORMATION.

With \$20 billion dollars of private and public investment reshaping the city, Parramatta's 185,000 strong workforce is expected to grow by 100,000 over the next 20 years, and the number of people who call our City home will almost double.

Add to that centres of excellence in education, health and wellbeing, research and innovation, entertainment, art and culture – the foundations are all here in Parramatta for a compelling economic and cultural transformation.

FLOURISHING HEALTH ECONOMY

REVOLUTIONISING THE LOCAL ECONOMY THROUGH INNOVATION, EMPLOYMENT AND INFRASTRUCTURE.



Artist Impressions of Westmead Precinct

The healthcare industry has revolutionised Parramatta's economy. With investment and talent drawn from all over the world, service providers and researchers are congregating to the Westmead Precinct – now an innovative healthcare hub.

The Westmead Precinct is one of the largest health, education, research and training precincts in Australia. Spanning 75 hectares, it includes four major hospitals, four world-leading medical research institutes, two university campuses and the largest research intensive pathology service in NSW. The healthcare sector is Parramatta's largest employer. Health Care employs 27,567 in 2019/2020, and generated \$3.856 billion in output.¹ This economic activity is set to keep on growing, with Deloitte Access Economics projecting that by 2036, the workforce at Westmead is expected to increase by 178% to 50,000 full-time jobs.²

This rapid growth has been made possible by investments in infrastructure, making Parramatta a convenient and well-connected location to work and live. Development of the new Light Rail will make Parramatta's health hub even more accessible in years to come.

Investment in infrastructure hasn't been limited to transport. The NSW Government, universities and the private sector have committed a combined total of \$3.4billion over the next ten years, which

will also go towards expanding health services, research facilities and education services. This includes the University of Sydney's plans to establish a Parramatta/Westmead Campus, part of the University's commitment to invest \$500million in the future of Western Sydney. By 2050, their vision is to host 25,000 students, generating 20,000 jobs and adding \$13billion to the NSW economy.³

The Westmead Research Hub is leading the charge against many of the most common diseases affecting the community.⁴ Heralded as the 'silicon valley of health innovation',⁵ the hub has generated over 35 patented discoveries, most of which are collaborations between hub members, and is focused on breaking ground across a number of research specialties like cancer, infectious and immune diseases, leukemia, mental health and neuroscience, and single gene diseases.⁶

These achievements are just the beginning, with the number of researchers in the precinct set to double by 2036.⁷

The Westmead Precinct has a collaborative edge, and is focused on the future. "Westmead is the mothership of medical science in NSW," says Sydney Business Chamber's Western Sydney Director, David Borger. "It stands out as possibly the biggest opportunity for intensive knowledge job growth in the region."⁸

1 National Institute of Economic and Industry Research (NIEIR), 2018. Compiled and presented in economy.id.
 2 Deloitte, Westmead Innovation District Report, 2016, <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-dae-westmead-innovation-district-report-190716.pdf>
 3 University of Sydney, 5 November 2018, <https://sydney.edu.au/news-opinion/news/2018/11/05/parramatta-westmead-campus-proposal-takes-shape.html>
 4 Westmead Research Hub, Real People. Real Science., 2019, <http://www.westmead.org.au/about-us/what-is-the-hub>
 5 Lisa Visentin, Sydney Morning Herald, 19 July 2016, <https://www.smh.com.au/national/nsw/westmead-could-become-silicon-valley-of-health-innovation-20160718-gg82lc.html>
 6 Graeme Loy, Westmead Innovation Precinct, 2018 <http://www.healthinnovationprecincts.com.au/upload/hip/grame-loy-case-study-presentation.pdf>
 7 Ashleigh Raper, Australian Broadcasting Corporation, 19 July 2016, <https://www.abc.net.au/news/2016-07-19/plan-to-turn-westmead-into-silicon-valley-of-health-services/7640072>
 8 Lisa Visentin, The Sydney Morning Herald, 19 July 2016, <https://www.smh.com.au/national/nsw/westmead-could-become-silicon-valley-of-health-innovation-20160718-gg82lc.html>

WESTMEAD: A NEW GENERATION OF AWARD-WINNING INNOVATION

CARDIOLOGIST PROFESSOR CLARA CHOW IS ONE OF THE MANY MEDICAL RESEARCHERS MAKING RESEARCH WAVES AT WESTMEAD.

As academic director of the Westmead Applied Research Centre, Professor Chow's focus on digital health research has uncovered innovative ways to promote patient health, long after a patient has left the hospital.

With heart disease the leading cause of mortality in Australians, her work is vital to the health and wellbeing of the community.

"We discovered that about a quarter of cardiovascular patients were repeat patients, coming back with subsequent heart attacks," says Professor Chow. "It became evident that our patients needed ongoing support, education and motivation after leaving the hospital to ensure a better and sustained recovery."

What began as a simple text message support solution has now evolved into an award-winning program, most recently winning the Google.org AI Impact Challenge which included \$1 million towards further evolving customised treatment and support for patients with heart disease.

"By monitoring patient health activity data, we can harness this data for the good of our patients, encouraging them to change behaviours, modify diets or increase activity."

It's an added after care bonus for patients to be able to receive such personalised support when they return to their home. And for an increasingly busy health precinct with a tremendous patient load, it's an innovative way to ensure healthcare workers are able to effectively and efficiently provide support to their patients.

"While Westmead has always been a busy hospital, it's now increasingly central to Sydney's population growth – bringing even more activity through the health precinct," says Professor Chow.

And it's not only heart disease that is under the eye of Westmead researchers – there have been groundbreaking research findings in areas as diverse as haematology, infectious diseases and cancer.

"The sense is that there are highly productive researchers based at the campus," says Professor Chow.

This includes researchers such as Dr Kenneth Micklethwaite of the Westmead Institute of Medical Research who is using modified immune cells for treating leukaemia and lymphoma.¹ And Professor David Gottlieb who is also working on CAR T-cell immunotherapy – one of the most promising cancer therapies² that has emerged in recent years.

Professor Chow says a standout element of the Westmead health precinct is the collegiate culture that exists between researchers. "Collegiality means you get exciting collaboration. People working on a new innovation in one area might share the information over lunch or in the corridors – and from these interactions, exciting innovative ideas can arise."

As one of the state's largest medical education facilities, as well as a leading destination for life-changing research, there is much excitement about the great potential for more medical breakthroughs – and for a new generation of world-leading medical professionals based in Parramatta's medical precinct in Westmead.

¹ Australian study first ever to use CAR T-cells to prevent relapse after treatment, Leukaemia Foundation, <https://www.leukaemia.org.au/australian-study-car-t-cells-prevent-relapse-treatment/>
² Establishment of a comprehensive pipeline for T-cell therapies, University of Sydney, 1 March 2019, <https://sydney.edu.au/news-opinion/news/2019/03/01/university-of-sydney-wins-7-5m-in-funding-for-landmark-cancer-re.html>

PROFESSOR CLARA CHOW

ACADEMIC DIRECTOR,
WESTMEAD APPLIED RESEARCH CENTRE

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DR ANDY MARKS

ASSISTANT VICE-CHANCELLOR,
WESTERN SYDNEY UNIVERSITY

THE EDUCATION CAPITAL



LaunchPad has been a wonderful success. We're bulging at the seams with innovative world-beating startups that are looking into the possibilities of AR and virtual reality, as well as engineering, textile design and medical technologies



Crowned the new 'Education Capital' of New South Wales¹, there is every reason to be excited about the talent in Parramatta excelling in research, study and work. University degree attainment levels in Parramatta are 36%, significantly higher than the State average of 21.8%, signalling a long and deep history of education in the region.

The NSW Department of Education's relocation into Parramatta in 2018 brought 1,800 jobs, and the Western Sydney University City Campus has accommodated 6,000 students, bringing the total number of Western Sydney University students in Parramatta to over 18,000. Plus, with the University of New England and the Sydney University Westmead Campus, the Parramatta Education and Training sector is a booming \$1.2billion industry, that continues to grow. The City will soon be home to the innovative joint venture between Western Sydney University and the University of New South Wales as the pair develop a world-class Engineering Innovation Hub on Hassall Street, set for completion in 2021.

Dr Andy Marks is Assistant Vice-Chancellor of Western Sydney University. He works closely with Parramatta's local industry and community to create innovative programs and projects.

"I've seen an attitudinal shift in the way people look at Parramatta. There's an excitement about anything being possible," says Dr Marks. "In established cities, it's harder to bring about the change we're seeing in Parramatta, where we're not limited by density or other pressures. There can be more individuality, and there's more room to make our mark."

Notably, LaunchPad is a Western Sydney University-initiated startup hub – and the first of its kind in the region. Situated on 100 George Street, the hub is experiencing incredible impact as an incubator for both nation-wide and global-reaching startups.

"LaunchPad has been a wonderful success," says Dr Marks. "We're bulging at the seams with innovative world-beating startups that are looking into the possibilities of AR and virtual reality, as well as engineering, textile design and medical technologies. There's a lot of cross-pollination which is contributing to the great diversity and creativity within the hub."

At the hub, researchers and students from the University are linking with entrepreneurs – as well as locally based businesses, who are keen to support and grow this startup culture in Parramatta.

"KPMG and NAB have been great supporters, which is crucial," says Dr Marks. "There's a belief that Western Sydney can't sustain an innovation culture – when in fact it has the largest concentration of small businesses in the country."

This support and the success of LaunchPad is one shining example of the way education, innovation and industry are successfully working together in Parramatta.

"Gone are the days the universities were considered separate from industry and the community," says Dr Marks. "At the University our strategy is to partner with industry to design our curriculum – we want our students to be able to graduate with practical experience, and into jobs that fulfil them."

¹ Parramatta Crowned New Education Capital, NSW State Government, 29 May 2018, <https://education.nsw.gov.au/news/media-releases/parramatta-crowned-new-education-capital>



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